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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/777,051

02/13/2004

Lianrui Chen

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EXAMINER

SMITH, NICHOLAS A

ART UNIT

PAPER NUMBER

1742

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

04/19/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/777,051	Applicant(s) CHEN, LIANRUI	
	Examiner Nicholas A. Smith	Art Unit 1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 6-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-20 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>2/13/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of Group I, claims 1-5 in the reply filed on 15 February 2007 is acknowledged.

Status of Claims

2. Claims 1-5 are ready for examination. Claims 6-20 are withdrawn from consideration.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-2 and 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reed (US 3,382,159) in view of Lepsius et al. (US 6,349,857) and as evidenced by Kataoka et al. (US 5,168,671), Yoshizumi et al. (US 6,033,730) and Jonte et al. (US 6,551,722).
5. In regards to claim(s) 1-2 and 4, Reed discloses a method of making an article by providing a shotblasting layer onto a portion of a substrate so as to compress the surface thereof, wherein the shotblasting layer is provided by a plurality different metal pellets characterized by 80 to 100 mesh and at a velocity related to 70 psi to 90 psi nozzle pressure (col. 3, line 68 to col. 4, line 20). While Reed does not specifically disclose stainless steel pellets, Examiner asserts that the Reed's genus of different

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metals would include the species of stainless steel. It is evidenced by Yoshizumi et al. that such as mesh size provides particles that overlap the claimed steel and stainless steel grain sizes (Yoshizumi et al., col. 1, lines 45-51). It would have been obvious to one of ordinary skill in the art to select the claimed grain sizes from the broader range taught by Reed because Reed teaches the same utility over the entire range. See MPEP 2144.05. It is evidenced by Kataoka et al. that nozzle pressures of 70 psi to 90 psi (5.3 to 6.3 kg/cc) would result in velocities in excess of 100 m/s (Kataoka et al., col. 5, lines 4-11). It would have been obvious to one of ordinary skill in the art to select the claimed velocity range from the range taught by Reed because Reed teaches the same utility over the entire range. See MPEP 2144.05. Reed discloses providing a plurality of metal plated layers as claimed over the shotblasting layer (Fig. 2, col. 5, lines 25-44). It is noted that while Reed does not specifically disclose that the aforementioned claimed layers are in sufficient thickness to increase the corrosion and abrasion resistance of the substrate, Jonte et al. evidences that it is well known that metal articles are coated or plated in order to provide wear, corrosion and abrasion resistance (Jonte et al., col. 1, lines 12-35).

6. Reed does not specifically disclose that the metal article is in a form of a dispensing apparatus or a push rod.

7. Lepsius et al. discloses a dispensing apparatus formed from a metal article with a push rod (abstract, Figure 1). It would have been obvious to one of ordinary skill in the art to modify Reed's method of making a metal article to be specifically in the form of a

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caulking gun because Lepsius et al. teaches that a caulking gun have utility in dispensing viscous masses (Lepsius et al., col. 1, lines 8-23).

8. In regards to claim(s) 5, Examiner asserts that an abrasion resistant coating would inherently be a reduced-friction coating and thus would facilitate extrusion of a flowable pasty substance from a dispensing apparatus.

9. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Reed (US 3,382,159) in view of Lepsius et al. (US 6,349,857) and as evidenced by Kataoka et al. (US 5,168,671), Yoshizumi et al. (US 6,033,730) and Jonte et al. (US 6,551,722) as applied to claim 2 above, and further in view of Jonte et al. (US 6,552,722)

10. Reed does not specifically disclose the thickness of the plated layers.

11. Jonte et al. discloses thicknesses of the specific metal layers that overlap the claimed total thickness (col. 3, lines 35-53; col. 4, lines 9-15; col. 4, lines 64-67). It would have been obvious to one of ordinary skill in the art to modify Reed in view of Lepsius et al.'s method with Jonte et al.'s plated thicknesses in order to provide a coating that is high in wear, corrosion and abrasion resistance (Jonte et al., col. 1, lines 12-35). Furthermore, it would have been obvious to one of ordinary skill in the art to select the claimed range from the broader prior art range because Jonte et al. teaches the same utility over the entire range. See MPEP 2144.05.

Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nicholas A. Smith whose telephone number is (571)-

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272-8760. The examiner can normally be reached on 8:30 AM to 5:00 PM, Monday through Friday.

13. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571)-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

14. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NAS

ROY KING
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